EPA Region 5 Records Ctr.

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PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

SPACE CENTER, INC. FORMERLY ALLIS-CHALMERS MATTESON, ILLINOIS ILD 074 428 434

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Waste Programs Enforcement Washington, DC 20460

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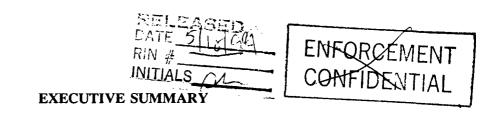
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TABLE OF CONTENTS

<u>Section</u> Page					
EXE	CUTIVE	SUMMARY ES-1			
1.0	INTRO	DDUCTION 1			
2.0	FACIL	LITY DESCRIPTION 4			
	2.1 2.2 2.3 2.4 2.5 2.6	FACILITY LOCATION 4 FACILITY OPERATIONS 4 WASTE GENERATION AND MANAGEMENT 6 HISTORY OF DOCUMENTED RELEASES 12 REGULATORY HISTORY 12 ENVIRONMENTAL SETTING 15			
	2.5	2.6.1 Climate 16 2.6.2 Flood Plain and Surface Water 16 2.6.3 Geology and Soils 16 2.6.4 Ground Water 17			
3.0	2.7	RECEPTORS			
3.0	SOLID WASTE MANAGEMENT UNITS				
4.0	AREAS OF CONCERN 2				
5.0	CONC	CLUSIONS AND RECOMMENDATIONS 27			
REF	ERENCE	33 33			
Attac	hment				
A V	A VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS				
D 1/	R VISUAL SITE INSPECTION FIELD NOTES				

LIST OF TABLES

<u>Tab</u>	<u>le</u> <u>Page</u>					
1	SOLID WASTE MANAGEMENT UNITS 7					
2	SOLID WASTES 9					
3	SWMU AND AOC SUMMARY 32					
LIST OF FIGURES						
<u>Fig</u> ı	<u>Page</u>					
1	FACILITY LOCATION					
2	FACILITY LAYOUT					

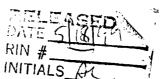


Resource Applications, Inc. (RAI) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Allis-Chalmers facility in Matteson, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified.

The former Allis-Chalmers property is presently owned by Space Center, Inc. (Space Center). Space Center is a warehouse operation storing pianos, plastic products, computers, and food additives. From 1970 to 1980, the facility was used by Allis-Chalmers to manufacture internal combustion lift trucks.

Space Center acquired the facility from Allis-Chalmers in 1988 and uses it as a warehouse. Space Center employs 17 people in two shifts. The Space Center facility does not presently generate or manage any RCRA-regulated hazardous wastes. The facility consists of two connected buildings surrounded by parking lots. One building, containing 442,000 square feet, is presently used as a warehouse. The other building, containing 62,000 square feet, is used for administrative offices. These are the original buildings on the site and were constructed in 1970 for Allis-Chalmers on what was previously agricultural land. The primary waste streams generated by Space Center are used oil and used batteries. Asbestos was generated during an asbestos abatement program in 1988 performed by Space Center.

Allis-Chalmers manufactured lift trucks at the facility. The 442,000-square-foot building was used for manufacturing and the 62,000-square-foot building was used for administrative offices. Activities performed by Allis-Chalmers in the manufacture of lift trucks included receiving and temporary storage of parts, welding, machining metal, assembly of components, painting, adding required fluids, and testing the final product. The facility had several grinding and painting operations, some of which were performed in booths. Several underground storage tanks (UST), since removed, were at the facility. They were used to store product (gasoline, diesel fuel, hydraulic oil) and wastes (waste solvent (D001, F005) and waste coolant). Allis-Chalmers was regulated as a hazardous waste storage facility. The primary wastes generated by Allis-Chalmers were waste paint





cleaning solvent (D001, F005), paint sludges (D001, F016, F017), hazardous waste liquid (D004, D007, D008, F002, F003), hazardous waste solid (D005, D007), corrosive waste (D002), and waste flammable liquids (D001).

Production activities ended in 1986. Allis-Chalmers conducted facility and RCRA-closure operations from 1986 to 1988. Because RCRA-closure activities were not conducted in accordance with an approved closure plan, Space Center had to perform additional RCRA-closure activities. The Allis-Chalmers RCRA Part A permit application was withdrawn in 1989 following RCRA closure of SWMUs 1, 2, and 3. Space Center never filed an RCRA Part A permit application.

The PA/VSI identified the following five SWMUs and two AOCs at the facility:

Solid Waste Management Units

- 1. Former Waste Solvent Tank
- 2. Former Outdoor Drum Storage Area Number 1
- 3. Former Outdoor Drum Storage Area Number 2
- 4. Former Waste Coolant Tank
- 5. Forklift Maintenance Waste Accumulation Area

Areas of Concern

- 1. North End Tank Area
- 2. South End Tank Farm

The nearest residence is located 0.5 mile south of the facility. Access to the two buildings is controlled by an alarm system and closed circuit cameras. A chain-link fence controls access for the entire western part of the site, while access to the eastern part of the facility is uncontrolled.

The nearest surface water body, an unnamed drainage ditch, borders the facility on three sides. This drainage ditch ultimately flows into Butterfield Creek, located about 3 miles north of the facility.

Ground water is not used as a water supply in the area. The location of the nearest drinking water well is not known. The Matteson area is served by a community water supply that comes from Lake Michigan.

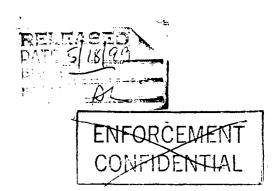
A palustrine, emergent, seasonally flooded wetland of approximately 2 acres in size is located approximately 1,500 feet west of the facility.

The potential for release to surface water and air is low for all SWMUs and AOCs due to SWMUs 1, 2 and 3 having been RCRA-closed and presently unused, the USTs (SWMUs 1, 3, and 4, AOCs 1 and 2) having been removed, and the small quantity and nature of the wastes managed in SWMU 5.

The potential for a continuing release to on-site soils from SWMUs 1, 2, and 3 is low, because those units have been RCRA-closed and are inactive. Releases to on-site soils have occurred at SWMUs 1 and 3, which resulted in the removal of contaminated soil from both units. RAI was unable to determine either the nature of the contamination or the quantity of soil removed due to a lack of information available during the PA/VSI. The potential for release to on-site soils from SWMU 5 is low due to its indoor location and the nature and small amount of waste managed. Contaminated soils may still be present at SWMU 4 and AOCs 1 and 2 because these units have not received closure approval from the Illinois Environmental Protection Agency under the Leaking Underground Storage Tank (LUST) Program. RAI was unable to determine the quantity of soil and contaminants removed from these areas during facility closure activities conducted by both Allis-Chalmers and Space Center, due to a lack of information in IEPA files and with the facility representatives.

The potential for release to ground water is low for SWMUs 1, 2, 3, and 5, but moderate for SWMU 4 and AOCs 1 and 2 due to the documented releases to soil and lack of information regarding the extent of remediation.

RAI recommends no further action for SWMUs 1, 2, 3, and 5. RAI recommends that LUST closure approval be obtained for SWMU 4 and AOCs 1 and 2.



1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. R05032 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 team member, provided the necessary assistance to complete the PA/VSI activities for the Allis-Chalmers facility, now owned by Space Center, Inc. (Space Center).

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has
 usually exempted from standards applicable to hazardous waste management
 units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility
- Obtain information on the operational history of the facility
- Obtain information on releases from any units at the facility
- Identify data gaps and other informational needs to be filled during the VSI

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA
- Identify releases not discovered during the PA
- Provide a specific description of the environmental setting
- Provide information on release pathways and the potential for releases to each medium
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the former Allis-Chalmers facility (EPA Identification No. ILD 074 428 434) in Matteson, Illinois, now owned by Space Center. The PA was completed on July 26, 1992. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. Additional information pertaining to the facility was obtained from publications of the U.S. Department of Agriculture (USDA), Federal Emergency Management Agency (FEMA), National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce (USDC), U.S. Geological Survey (USGS), and the U.S. Department of the Interior (USDI). The VSI was conducted on July 27, 1992. It included interviews with a facility representative from Space Center, the current owner of the facility, and a walk-through inspection of the facility. RAI identified five SWMUs and two AOCs at the facility.

The VSI is summarized and seven inspection photographs are included in Attachment A. Field notes from the VSI are included in Attachment B.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; a history of documented releases; regulatory history; environmental setting; and receptors.

2.1 FACILITY LOCATION

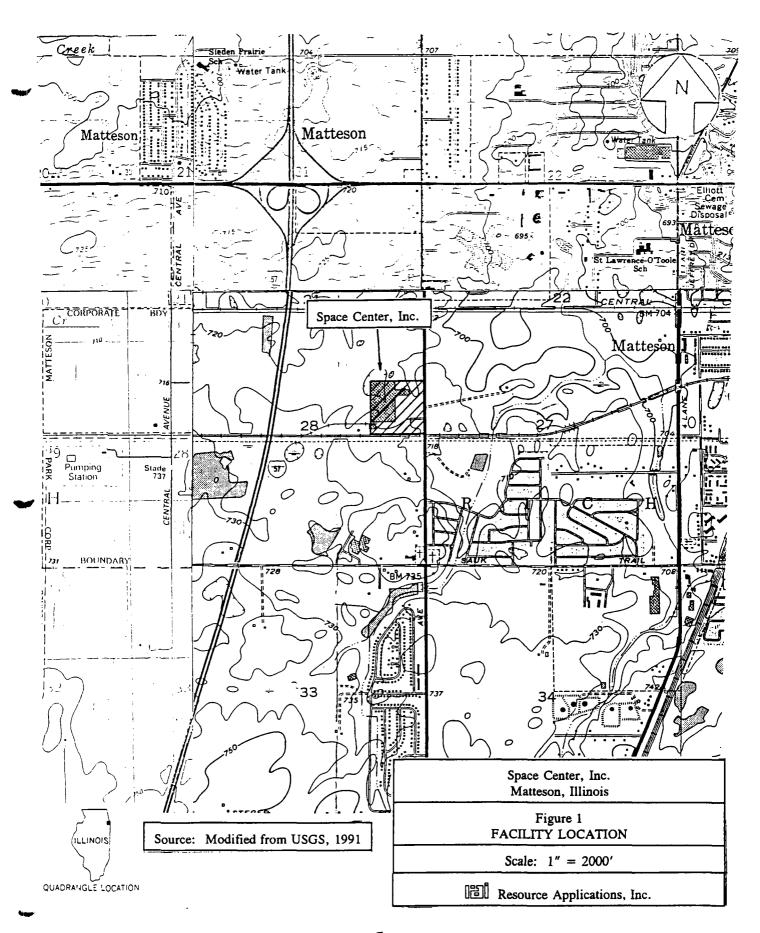
The former Allis-Chalmers facility is located at 21800 South Cicero Avenue in Matteson, Cook County, Illinois (latitude 41°30′45″ N and longitude 87°44′0″ W). The facility occupies 157 acres in an industrial, commercial, and agricultural area. The facility location and its relationship to surrounding topographic features is shown in Figure 1.

The former Allis-Chalmers facility is bordered on the north by an open field and shopping mall, on the west by farmland and Interstate 57, on the south by railroad tracks and farmland, and on the east by Cicero Avenue and farmland.

2.2 FACILITY OPERATIONS

The former Allis-Chalmers property is presently owned by Space Center. Space Center is a warehouse operation which stores food additives, pianos, plastic products, and computers. Space Center acquired the property in April 1988 and commenced operations later that year. Solid wastes generated from past and present facility operations and the SWMUs where they are managed are discussed in detail in Section 2.3.

Space Center employs 17 people in two shifts. The Space Center facility does not presently generate or manage any RCRA-regulated hazardous wastes. Facility access is controlled by an alarm system and private security service which responds to the alarm. The facility consists of two connected buildings surrounded by parking lots. One building, containing 442,000 square feet is used by Space Center as a warehouse. The other building, containing 62,000 square feet, is partially used by Space Center for administrative offices. The rest of this building is vacant. These are the original



buildings on the site and were constructed in 1970 for Allis-Chalmers on what was previously agricultural land.

Allis-Chalmers manufactured lift trucks at the facility from 1970, when this facility was built, until 1986. It is not known how many employees were employed by Allis-Chalmers. Activities performed by Allis-Chalmers in the manufacture of lift trucks included receiving and temporary storage of parts, welding, machining metal, assembly of components, spray painting, adding required fluids and testing the final product. The facility had several grinding and painting operations, some of which were performed in booths. All manufacturing operations were performed in the 442,000-square-foot building. Seven underground storage tanks (UST), with capacities ranging from 2,000 gallons to 10,000 gallons, were at the facility. They were used to store products (gasoline, diesel fuel, hydraulic oil) and wastes (waste solvent and waste coolant). Other activities performed at the facility included sales, training, development engineering, general facility maintenance, and administrative operations.

2.3 WASTE GENERATION AND MANAGEMENT

Wastes are generated and managed at various locations at the facility. SWMUs and their current status are identified in Table 1. The locations of SWMUs and AOCs in relation to the facility layout are shown in Figure 2. Present and past wastes generated at the facility are summarized in Table 2. SWMUs are discussed in detail in Section 3.0. Facility generation and management of both hazardous and nonhazardous wastes, are discussed below.

The primary waste streams generated by Space Center are used oil and used batteries.

Asbestos was generated during an asbestos abatement program performed by Space Center in 1988.

Used oil (nonhazardous) is generated from the maintenance of the forklifts by Space Center. The used oil is accumulated in a 55-gallon drum in the Forklift Maintenance Waste Accumulation Area (SWMU 5) at the rate of approximately 1 drum per year. The used oil is exchanged for new oil with Consumer Tire and Oil of Chicago, Illinois.

TABLE 1
SOLID WASTE MANAGEMENT UNITS

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit ^a	Status
1	Former Waste Solvent Tank	Yes	RCRA-closed, removed
2	Former Outdoor Drum Storage Area Number 1	Yes	RCRA-closed, inactive
3	Former Outdoor Drum Storage Area Number 2	Yes	RCRA-closed, inactive
4	Former Waste Coolant Tank	No	Removed, inactive
5	Forklift Maintenance Waste Accumulation Area	No	Active

Note:

A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.

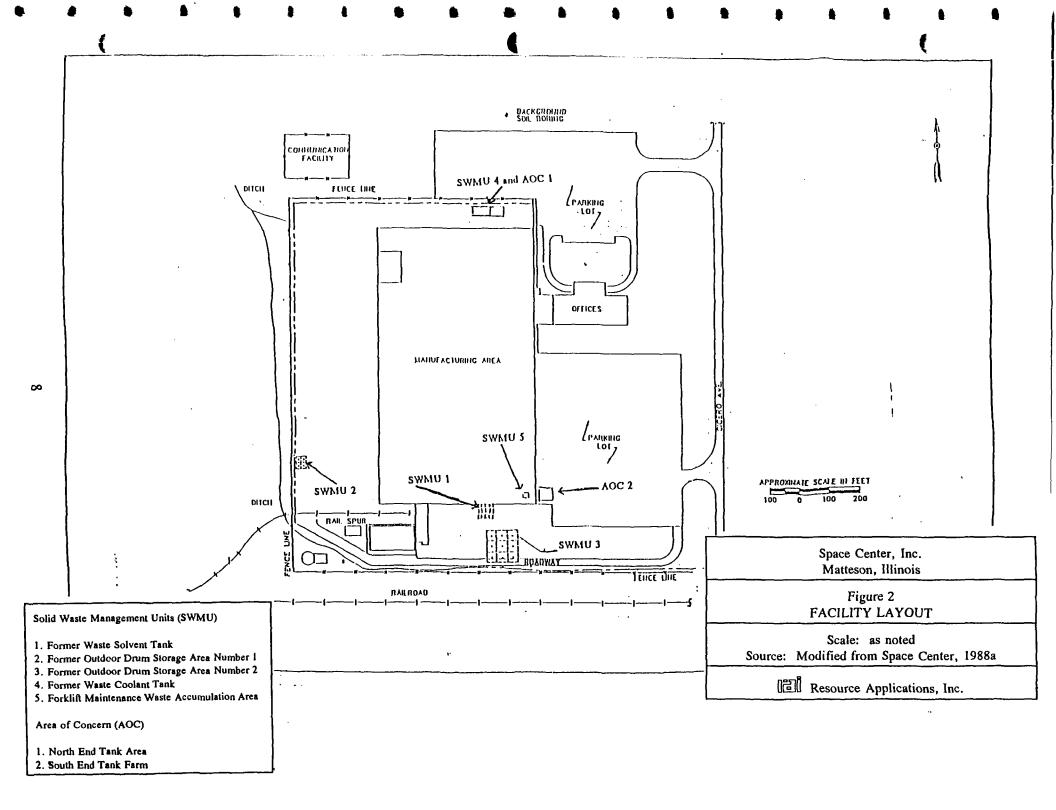


TABLE 2
SOLID WASTES

Waste/EPA Waste Code ^a	Source ^b	Solid WasteManagement Unit ^e
Used Oil/NA	Forklift Maintenance	5
Used Batteries/NA	Forklift Maintenance	5
Asbestos ^{d,g} /ORM	Abatement Activities	None
Contaminated soil ^{o,f,g} /NA	Facility Closure Activities	None
Clean Up Wastes ^f /D001, D002, D004, D005, D007, D008, F002, F003, F005	Facility Closure Activities	3
Waste Paint Cleaning Solvent / D001, F005	Cleaning of painting equipment	1
Paint Sludgesf/F016, F017, D001	Painting	2 and 3
Hazardous Waste Liquid ^f /D004, D007, D008, F002, F003	Unknown	2 and 3
Hazardous Waste Solid ^f /D005, D007	Unknown	2 and 3
Corrosive Waste ^f /D002	Unknown	2 and 3
Waste Flammable Liquidf/D001	Unknown	2 and 3
Waste Coolant ^f /NA	Equipment Cooling	4
Paint Sludges ^f /F016, F017, D001 Hazardous Waste Liquid ^f /D004, D007, D008, F002, F003 Hazardous Waste Solid ^f /D005, D007 Corrosive Waste ^f /D002 Waste Flammable Liquid ^f /D001	equipment Painting Unknown Unknown Unknown Unknown	2 and 3

Notes:

- Not applicable (NA) designates nonhazardous waste.
- "Unknown" indicates that the waste was generated at the facility but that the process that generated the waste cannot be determined.
- "None" indicates that the waste stream is not managed on site.
- d "ORM" stands for other regulated material.
- The waste code (or codes) that this waste was managed under is not available.
- This waste is no longer generated.
- This waste was a one-time generation.

Used batteries from forklifts are presently being accumulated on a wood pallet in the Forklift Maintenance Waste Accumulation Area (SWMU 5) until disposal arrangements can be made. The facility representative was not sure how long the batteries have been accumulating.

After acquiring the property from Allis-Chalmers, Space Center contracted Maecorp Environmental Solutions of Homewood, Illinois to perform asbestos abatement. This work was performed between April and June 1988. The asbestos was removed during abatement activities and was not managed on site.

During closure activities, conducted between December 1986 and November 1988, by both Allis-Chalmers and Space Center, contaminated soil was generated. The 24.53 tons of soil removed from the Former Waste Coolant Tank (SWMU 4) area were contaminated with oil. The soil removed from Former Outdoor Drum Storage Area Number 2 (SWMU 3) by Space Center was contaminated with xylene, 1,1,1-trichloroethane, and had a high pH. It is not known what contaminates were contained in the remaining soils which were removed, but several reports indicate that contaminated soil was present or removed (Vedder, Price, Kaufmann and Kammholz (VPK&K), 1987; Space Center 1988a, 1988b). Contaminated soil (with unspecified contaminants, except as noted above) was excavated and removed directly from the facility to an unidentified landfill. The total quantity of soil removed or the waste codes it was manifested under are not known. According to the final closure plan sampling was performed; however, no sampling results were made available during the PA/VSI (VPK&K, 1987; Space Center, 1988a, 1988b). IEPA has no additional information regarding wastes generated during closure (IEPA, 1992b).

Cleanup wastes, such as cleaning and decontaminating solutions, were managed in 55-gallon drums and accumulated in SWMU 3. These wastes were managed under one or more of the following waste codes: D001, D002, D004, D005, D007, D008, F002, F003, and F005. Information regarding the volumes or rates of generation of these wastes were not available during the PA/VSI. These wastes were generated by both Allis-Chalmers (1986 to 1988) and Space Center during closure activities (1988 and 1989). Closure activities were conducted for the entire facility and for SWMUs 1, 2, and 3. The wastes generated during Allis-Chalmers' closure activities were removed by Chemical Waste Management, Inc.

The primary wastes generated by Allis-Chalmers were waste paint cleaning solvent (D001 and F005), paint sludge (F016, F017, and D001), hazardous waste liquid (D004, D007, D008, F002, and F003), hazardous waste solid (D005 and D007), corrosive waste (D002), and waste flammable liquid (D001). The rates of generation and how the wastes were disposed of except as noted, are not known for any of the wastes that were generated by Allis-Chalmers.

Waste paint cleaning solvent (D001 and F005) was generated by Allis-Chalmers between 1970 and 1986 from cleaning painting equipment. This waste was drained directly from the painting equipment into the Former Waste Solvent Tank (SWMU 1), an underground storage tank located at the south end of the facility. In the last 6 months of 1982, 1,600 gallons of this waste was generated and transported by Chemical Waste Management of Alsip, Illinois, and Hydrite Chemical of Cottage Grove, Wisconsin to an unspecified facility for disposal (Allis-Chalmers, 1983). No further information was available from IEPA files or facility representatives.

The paint sludges (F016, F017, and D001) were apparently periodically removed by Allis-Chalmers from the process units into 55-gallon drums, which were then taken outside for storage in either the Former Outdoor Drum Storage Area Number 1 (SWMU 2) until the end of 1983, or the Former Outdoor Drum Storage Area Number 2 (SWMU 3) from 1984 until September 1986. During the first 6 months of 1982, 15,455 gallons of this waste were generated and shipped off-site; the transporter and disposal facilities are not listed (Allis-Chalmers, 1983). No further information was available from IEPA files or facility representatives.

Other wastes generated during the various manufacturing operations at Allis-Chalmers between 1970 and 1986, and during facility closure from 1986 through 1987, were a hazardous waste liquid (D004, D007, D008, F002 and F003), hazardous waste solid (D005, D007), corrosive waste (D002), and waste flammable liquid (D001). These wastes were managed in 55-gallon drums at either SWMU 2 or SWMU 3. The rates and processes from which these wastes were generated and the disposal methods are not known. No further information was available from IEPA files or facility representatives.

A waste coolant (nonhazardous) consisting of an oil and water mixture was generated by Allis-Chalmers from equipment cooling operations between 1970 and 1986. The waste coolant was

managed in the Former Waste Coolant Tank (SWMU 4), an underground storage tank located outside at the north end of the facility. The rate at which this waste was generated and the disposal method are not known. No further information was available from IEPA files or facility representatives.

2.4 HISTORY OF DOCUMENTED RELEASES

This section discusses the history of documented releases to ground water, surface water, air, and on-site soils at the facility.

The VPK&K final closure plan states that during operation of the facility by Allis-Chalmers, there were "no known leaks or spills in or from the hazardous waste management units at the facility" (VPK&K, 1987). However, an unknown amount of contaminated soil was removed by Allis-Chalmers around the Former Waste Solvent Tank (SWMU 1). The excavated hole was backfilled with compacted stone fill. Also, in connection with the removal of the Former Waste Coolant Tank (SWMU 4), 24.53 tons of soil contaminated with oil were removed (VPK&K, 1987). No additional information was available from the facility representatives or the IEPA files.

After the property transfer in December 1987, it was learned that Allis-Chalmers had not received approval of its closure plan prior to sale of the property. This led to Space Center's submittal of a final closure plan which was approved by IEPA (Space Center, 1988a; IEPA, 1988b). After the final closure plan was approved, an unknown amount of additional soil was removed from the UST areas (AOCs 1 and 2, and SWMU 4) and the Former Outdoor Drum Storage Area Number 2 (SWMU 3). Soil around SWMU 3 was contaminated with 1,1,1-trichloroethane, xylene and elevated pH (Space Center, 1988b). The contaminants around the UST areas were not specified, but an unspecified amount of additional soil was excavated from the UST areas and disposed of in accordance with all applicable state and local regulations (Space Center, 1988b).

2.5 REGULATORY HISTORY

Allis-Chalmers submitted a Notification of Hazardous Waste Activity form on August 12, 1980 (VPK&K, 1987). This notification listed the facility as a generator, generating wastes with the following codes: F001, F005, F017, F018, and D001. Allis-Chalmers submitted a

RCRA Part A permit application on November 18, 1980 (Allis-Chalmers, 1980). According to Allis-Chalmers, the RCRA Part A permit application was submitted because Allis-Chalmers had intended to institute a solvent recovery program at the facility; however, this program was never initiated (VPK&K, 1987). The Part A permit application listed two process codes: S01 (container storage), the Former Outdoor Drum Storage Area Number 1 (SWMU 2) with a capacity of 8,000 gallons and S02 (tank storage), the Former Waste Solvent Tank (SWMU 1) with a capacity of 4,000 gallons. The Part A permit application listed the following waste codes: F001 (spent halogenated solvents used in degreasing), F005 (spent non-halogenated solvents), F017 and F018 (both were paint related wastes, since delisted by EPA). No revisions to the RCRA Part A permit application were filed. On July 23, 1982, Allis-Chalmers requested that the RCRA Part A permit application be withdrawn after deciding not to institute the solvent recovery program (Allis-Chalmers, 1982). On June 13, 1982, EPA denied the withdrawal request, due to insufficient information (USEPA, 1982). In 1984, EPA reviewed the request for the withdrawal of the Part A permit application and decided the facility had to go through RCRA closure (USEPA, 1984). The RCRA Part A permit application was subsequently withdrawn in 1989 upon completion of closure (IEPA, 1989a). All correspondence from IEPA regarding closure was sent to Allis-Chalmers.

On September 12, 1985, Allis-Chalmers submitted a Modified Closure Plan to IEPA (no indication of when the original closure plan was submitted was present in the files available for review during the PA) (Allis-Chalmers, 1985). There was no correspondence in the files available for the PA to indicate whether or not IEPA approved the closure plan. The first phase of closure activities was conducted by Allis-Chalmers and its contractors between 1986 and 1987 in accordance with the 1985 Modified Closure Plan (Allis-Chalmers, 1985). Closure activities were conducted due to permanent cessation of manufacturing activities at this location in November, 1986 (VPK&K, 1987). The activities performed during this phase included the cleaning, decontamination, and removal of all process equipment. After cleaning, process equipment was sold at an auction and removed by purchasers in 1986 or 1987. All lines (both product and waste piping) and equipment were flushed and scraped. The waste generated was drummed and managed in the Former Outdoor Drum Storage Area Number 2 (SWMU 3). Facility closure activities included the removal of all underground storage tanks: two that were used for waste (SWMU 1 and SWMU 4), and five others (located in the North End Tank Area (AOC 1) and the South End Tank Farm (AOC 2)) that were used for product storage (gasoline, hydraulic oil, diesel fuel, and antifreeze). Subsequently,

underground storage tank excavations were filled and repaved with 6 inches of reinforced concrete. During facility closure activities, 24.53 tons of dirt contaminated with oil were removed from the Former Waste Coolant Tank (SWMU 4). This work was performed by LWD, Inc. Soil samples were supposed to have been collected in accordance with the Allis-Chalmers Closure Plan and analyzed, but no results are available to indicate this occurred (VPK&K, 1987). After all waste was removed, SWMUs 2 and 3 were decontaminated (VPK&K, 1987).

On September 28, 1987, Allis-Chalmers notified IEPA that it had filed for bankruptcy on June 29, 1987. A final closure plan was filed on October 29, 1987 (VPK&K, 1987). The final closure plan was rejected by IEPA on January 28, 1988 (IEPA, 1988a). Space Center acquired the property in 1988. A new closure plan was submitted by Space Center, the new owners of the facility on June 24, 1988 (Space Center, 1988a). This closure plan was accepted by IEPA (IEPA, 1988b) with conditions (such as the cleanup objectives to be met, the effective date and the certification statement to accompany the closure documentation report). The second phase of closure activities performed under this closure plan included decontaminating the Former Outdoor Drum Storage Areas Number 1 (SWMU 2) and Number 2 (SWMU 3), and performing soil sampling at the Former Waste Solvent Tank (SWMU 1) and SWMUs 2 and 3. On November 14, 1988, a closure documentation report was submitted to IEPA by Space Center and its consultant ERM-North Central, Inc. (Space Center, 1988b). The Space Center representative did not have a copy of the closure documentation report (the files available for the PA had only a partial copy of this report). According to Space Center's closure documentation report, contaminated soil was removed from SWMU 3 and the "former underground tank areas" (Space Center, 1988b). No soil sampling results were available in the files reviewed during the PA or from the Space Center representative. A closure certification approval letter, addressed to Allis-Chalmers, was issued by IEPA following completion of these activities (IEPA, 1989a). This letter also indicated that IEPA had withdrawn the facility's RCRA Part A permit application. The facility, under Space Center ownership and operation, is no longer regulated under RCRA hazardous waste regulations, because it does not generate hazardous wastes.

The former Allis-Chalmers facility was inspected several times by IEPA. A 1982 inspection revealed that Allis-Chalmers was in violation for not having danger signs, a waste analysis plan, inspection training, operating records, and not having filed a contingency plan and resulted in IEPA sending a letter to the facility (IEPA, 1982). A Compliance Inquiry Letter (CIL) was sent to Allis-

Chalmers in 1985 for failure to have a contingency plan, specific waste hauler permit, and financial responsibility (IEPA, 1985). Another CIL was issued by IEPA in 1987 for violations related to closure and hazardous waste annual reports (IEPA, 1987). Allis-Chalmers responded to each of the IEPA letters, although not always addressing all of the problems (Allis-Chalmers, 1988; IEPA 1989b). A 1989 letter from IEPA indicated that the 1987 violations were resolved (IEPA, 1989b).

Allis-Chalmers did not have a National Pollutant Discharge Elimination System (NPDES) permit. Allis-Chalmers had several air emissions permits for boilers, heating units, prime painting operation, tool grinding, grind booth, and 6 ECU units (meaning unknown). Allis-Chalmers operations have ceased and all process units have been removed at the facility (Allis-Chalmers, 1980). No violations of the air permits were found.

The facility had several underground storage tanks (the Former Waste Solvent Tank (SWMU 1), Former Waste Coolant Tank (SWMU 4), North End Tank Area (AOC 1) and South End Tank Farm (AOC 2)). As discussed previously in this section, all underground storage tanks were removed. No information that these areas were closed in accordance with IEPA's Leaking Underground Storage Tank program was available (IEPA, 1992a).

Space Center does not have an NPDES permit, or an air emissions permit. There are no underground storage tanks remaining at the facility

There has been no CERCLA activity at the site.

2.6 ENVIRONMENTAL SETTING

This section describes the climate; flood plain and surface water; geology and soils; and ground water in the vicinity of the facility.

2.6.1 Climate

The climate in Cook County is predominantly continental with frequent short fluctuations in temperature, humidity, cloudiness, and wind direction (Ruffner, 1985). The average daily temperature is 51.4 degrees Fahrenheit (°F). The lowest average daily temperature is 20.3°F in January. The highest average daily temperature is 81.0°F in July (NOAA, 1990).

The total annual precipitation for the county is 33.34 inches. The mean annual lake evaporation for the area is about 30 inches (USDC, 1968). The 1-year, 24-hour maximum rainfall is 2.4 inches (USDC, 1963).

The prevailing wind is from the west-southwest. Average wind speed is highest in April at 12 miles per hour (NOAA, 1990).

The continental weather of Cook County is partially modified by Lake Michigan. During the warm season there is frequently a cool lake breeze which reduces daytime temperatures near the shore by up to 10 degrees. In late autumn and winter, cold air masses reaching land are tempered by passage over the lake (NOAA, 1990).

2.6.2 Flood Plain and Surface Water

For flood classification purposes, the facility is located in Zone C, outside the 100- and 500-year flood plains (FEMA, 1982). Surface water runoff from the facility flows to an unnamed drainage ditch which borders the facility on three sides. This ditch drains to an unnamed stream that flows into Butterfield Creek located approximately 3 miles north of the facility. No other surface water bodies are located within one mile of the facility.

2.6.3 Geology and Soils

Site-specific information regarding soils and geology is not available, so regional information is presented here. Soils on the site are classified as Urban land-Orthents Complex. This complex

consists of a clayey soil which has been altered for the construction of buildings, parking lots, and pavements (USDA, 1976).

Beneath the surface soils is glacial drift belonging to the Clarendon Moraine unit of the Valparaiso Moranic System of the Wadsworth and Haeger Members of the Wedron Formation. This drift typically consists of a silty clayey till, which contains local areas of sandy or gravelly till. In the vicinity of the site the drift is typically about 100 feet thick (Willman, 1971).

Bedrock formations beneath the site consist mainly of Silurian age dolomite, sandstone, and shale. The surface of these deposits is approximately 100 feet below the surface. These deposits are approximately 500 feet thick. The Silurian formations overlie shales and limestones of the Maquoketa Group, which is about 250 feet thick. Beneath the Maquoketa rocks are dolomites of the Galena-Platteville Group and sandstones of the Prairie du Chien group starting at a depth of approximately 850 feet and extending to depths of approximately 1,400 feet. Beneath the Ordovician rocks are sandstones, siltstones, and dolomites of Cambrian age which are 1,700 - 3,900 feet thick (Willman, 1971). Beneath the layered sedimentary rocks, Precambrian crystalline rocks form a relatively impermeable basement at depths from 3,000 to 5,000 feet below the surface (Suter, 1959).

2.6.4 Ground Water

Site specific information is not available so regional information is presented here. Ground water in northeast Illinois exists in four major aquifer systems. The systems are, in order of descending depth: the glacial drift system, the shallow bedrock system, the Cambrian-Ordovician system, and the Mt. Simon system (Willman, 1971). The Village of Matteson obtains its drinking water from Lake Michigan. The use of these aquifers in the vicinity of the site is not known.

In the shallow unconsolidated deposits of the glacial drift system, which exists at depths of approximately 5 to 100 feet in the vicinity of the site, ground water flow is generally dependant on the local topography which has been modified by urban development (Cravens and Zahr, 1990). Thus, due to lack of site-specific information, a ground water flow direction can not be determined for the facility.

The shallow bedrock system consists mainly of Silurian dolomite. This dolomite is typically 100 feet thick and occurs at a depth of 100 feet. Movement within the Silurian dolomite occurs in joints, fissures, solution cavities, and bedding plane openings. Regional ground water movement within the Silurian system of northeastern Illinois tends to be from the northwest towards the southeast (Cravens and Zahr, 1990).

The deep bed aquifer systems, comprised mainly of sandstones and dolomites, include the Cambrian-Ordovician and Mt. Simon aquifer systems which occur at depths of over 1,000 feet. The major aquifers in the deep systems are the Glenwood-St. Peter, Ironton-Galesville, and Mt. Simon Sandstones (Hughes, et al., 1966). Recharge to the Cambrian-Ordovician system occurs in areas of outcrop, shallow cover by glacial drift, and from leakage downward through the shallow bedrock system. Recharge to the Mt. Simon aquifer occurs from an outcrop region located in central southern Wisconsin (Willman, 1971).

2.7 RECEPTORS

The former Allis-Chalmers facility occupies 157 acres in an industrial, commercial, and agricultural area in Matteson, Illinois. Matteson has a population of about 11,400 people, and neighboring Richton Park has a population of about 10,500 people.

The former Allis-Chalmers facility is bordered on the north by an open field and shopping mall, on the west by farmland and Interstate 57, on the south by railroad tracks and farmland, and on the east by Cicero Avenue and farmland. Access to the entire western portion of the site is controlled by a 6-foot-high fence on 3 sides and a building on the 4th side. Access to the eastern portion of the site is uncontrolled. All buildings are equipped with an alarm system and surveillance cameras, with a 24-hour guard service responding to any alarms. When Allis-Chalmers operated the site, the facility was completely fenced with a 24-hour guard. The nearest school, Rich South High School, is located about 0.5 mile south of the facility. The nearest residence is located approximately 0.5 mile south of the facility.

The nearest surface water body, an unnamed drainage ditch, borders the facility on three sides. This drainage ditch ultimately flows into Butterfield Creek, located about 3 miles north of the facility.

Ground water is not used as a water supply in the area. The location of the nearest drinking water well is not known. The Matteson area is served by a community water supply that comes from Lake Michigan.

A palustrine, emergent, seasonally flooded wetland of approximate 2 acres in size is located approximately 1,500 feet west of the facility (USDI, 1984).

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the five SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and RAI's observations. Figure 2 shows the SWMU locations.

SWMU 1

Former Waste Solvent Tank

Unit Description:

This unit was a 2,000-gallon underground storage tank used to store waste paint solvent prior to disposal. This tank is identified as a 4,000-gallon tank in the RCRA Part A permit application and as a 2,000-gallon tank with 6-foot by 15-foot dimensions in the closure plans and closure reports (VPK&K, 1987; Space Center, 1988a). No information on materials of construction is available. Waste paint solvent was pumped into this unit from process equipment through a pipe system (see Photograph No. 1).

Date of Startup:

This unit began operation when the facility opened in 1970.

Date of Closure:

This unit was removed in January 1986 by Allis-Chalmers and subsequently RCRA-closed in 1989 by Space Center.

Wastes Managed:

This unit managed waste paint cleaning solvent (D001 and F005).

Release Controls:

This unit did not have any release controls.

History of

Documented Releases:

Some unspecified contamination was discovered in surrounding soils during removal of the unit. An unknown quantity of contaminated soil was excavated in 1985 and landfilled at an unidentified landfill (VPK&K, 1987; Space Center, 1988b).

Observations:

A concrete patch, installed in 1986, is above where this unit was located. This concrete was put in after remedial activities had been performed. No vent pipes, fill pipes, or wastes were in the area during the VSI and RAI noted no evidence of release.

SWMU 2

Former Outdoor Drum Storage Area Number 1

Unit Description:

This unit was located on the west side of the facility against the west fence and north of the railroad spur, and measured 30 feet by 40 feet. The unit consisted of a 6-inch-thick reinforced concrete slab which drained toward a ditch running north-south along the west side of the plant area (see Photograph No. 2).

Date of Startup:

This unit began operation about the time the facility opened in 1970.

Date of Closure:

This unit was used until 1983. This unit was RCRA-closed in 1989.

Wastes Managed:

This unit managed hazardous waste liquid (D007, D008, F002, F003), paint sludges (F016, F017, D001), hazardous waste solid (D005 and D007), corrosive waste (D002), and waste flammable liquid (D001). The wastes were managed in 55-gallon drums.

Release Controls:

It is not known if this unit had secondary containment.

History of

Documented Releases:

No releases from this unit have been documented.

Observations:

This area is paved. No drums or wastes were in this area during the VSI and RAI noted no evidence of release.

SWMU 3

Former Outdoor Drum Storage Area Number 2

Unit Description:

This unit was located south of the manufacturing building and east of the railroad spur, near the south fence of the facility. This unit was on a 6-inch-thick reinforced concrete slab, and measured 100 feet by 100 feet. This unit drained to a drainage ditch running parallel to the south property line (see Photograph No. 3).

Date of Startup:

This unit began operation in 1983.

Date of Closure:

This unit ceased operation in September 1987. This unit was RCRA-closed in 1988.

Wastes Managed:

This unit managed hazardous waste liquid (D007, D008, F002, F003), paint sludges (F016, F017, D001), hazardous waste solid (D005 and D007), corrosive waste (D002), and waste flammable liquid (D001) and clean up wastes (D001, D002, D005, D007, D008, F002 and F003). The wastes were managed in 55-gallon drums.

Release Controls:

It is not known if this unit had secondary containment.

History of

Documented Releases:

During closure activities conducted by Space Center, it was determined that some of the soil beneath the concrete pad had low pH, 1,1,1-trichloroethane, and xylene in excess of cleanup standards (Space Center, 1988a). An unknown quantity of contaminated soil was removed and landfilled at an unidentified landfill.

Observations:

A new section of asphalt is now where this unit was located. This asphalt was placed after the remedial activities were completed. No drums or wastes were in this area during the VSI and RAI noted no evidence of release.

SWMU 4

Former Waste Coolant Tank

Unit Description:

- This unit was a 4,000-gallon underground storage tank located outdoors at the north end of the facility. The tank was reportedly of steel construction, with unknown lining and corrosion protection (see Photograph No. 4).

Date of Startup:

This unit began operation about the time the facility opened in 1970.

Date of Closure:

This unit was removed in 1987.

Wastes Managed:

This unit managed nonhazardous waste coolant.

Release Controls:

There was no secondary containment for this unit.

History of

Documented Releases:

Contaminated soil was removed from this area during facility closure

activities.

Observations:

This unit was removed during facility closure activities. A concrete patch is now above where the unit was located. No fill pipes, vent pipes or wastes were in the area during the VSI and RAI noted no evidence of release.

SWMU 5

Forklift Maintenance Waste Accumulation Area

Unit Description:

This unit is an area of the southeast corner of the warehouse building, and is used to accumulate used oil and used batteries. The unit consists of wood pallets which are on a concrete floor, that is at least 6 inches thick, and measures about 10 feet by 15 feet. There are no floor drains in the vicinity of this unit (see Photographs No. 5 and 6).

Date of Startup:

This unit began operation in 1988

Date of Closure:

This unit is active.

Wastes Managed:

This unit manages nonhazardous used oil and used batteries from Space Center's forklifts. The used oil is accumulated in a 55-gallon drum on a pallet. The batteries are accumulated on a pallet.

Release Controls:

The floor of the building is reinforced concrete, at least 8 inches thick.

History of

Documented Releases:

No releases from this unit have been documented.

Observations:

One 55-gallon drum and eight batteries were observed in the area. Some minor staining was noted in this area, mostly oil-stained cardboard.

4.0 AREAS OF CONCERN

RAI identified two AOCs during the PA/VSI. These AOCs are discussed below; their locations are shown in Figure 2.

AOC 1 North End Tank Area

This AOC, located at the north end of the facility, contained two underground storage tanks; a 4,000-gallon waste coolant tank (SWMU 4) and a 4,000-gallon gasoline tank. These tanks were installed in 1970 and removed in 1987. The removal procedure for the underground storage tanks, conducted by Allis-Chalmers, consisted of disconnecting, flushing and draining distribution lines; pumping the liquids out of the tanks, removing and cleaning the tanks; drumming any solids generated; and removing and cutting the tanks. An unknown quantity of soil with unknown contaminants was excavated and landfilled at an unidentified landfill. The excavations were filled, compacted, and repaved with 6 inches of reinforced concrete. These activities were performed by LWD Inc. in May 1987.

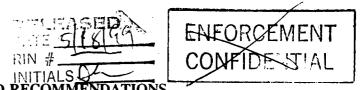
Closure activities conducted by Space Center included soil sampling and some additional contaminated soil removal. Soil sampling results, and the amount of soil removed and its disposal are not known or available. This area is identified as an AOC because no record was found of "LUST Closure" certification, pursuant to IEPA's Leaking Underground Storage Tank (LUST) program, for this tank area.

AOC 2 South Tank Farm

The south tank farm contained four underground storage tanks: one 10,000-gallon gasoline tank, one 10,000-gallon hydraulic oil tank, one 4,000-gallon diesel fuel tank, and one 4,000-gallon anti-freeze tank. These tanks were installed when the facility was built in 1970 and were removed in 1987. The removal procedure for the underground storage tanks, conducted by Allis-Chalmers, consisted of disconnecting, flushing and draining distribution lines; pumping the liquid out of the tanks, removing

and cleaning the tanks; drumming any solids generated, and removing and cutting the tanks. Contaminated soil was excavated and landfilled at an unspecified landfill. The excavations were filled with Grade 8 gravel, compacted, and topped with 6 inches of reinforced concrete. These activities were performed by LWD, in May 1987.

Closure activities conducted by Space Center included soil sampling and some additional contaminated soil removal. Soil sampling results, the amount of soil removed, and how it was disposed of are not known or available. This area is identified as an AOC because no record was found of the IEPA providing "LUST Closure" certification, pursuant to IEPA's LUST program, for this tank area.



5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified five SWMUs and two AOCs at the former Allis-Chalmers facility. Background information on the facility's location; operations; waste generation and management; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU and AOC. Table 3, at the end of this section, summarizes the SWMUs and AOCs at the facility and the recommended further actions.

SWMU 1

Former Waste Solvent Tank

Conclusions:

This unit was an underground storage tank used to store waste solvents from the painting operations. The tank was removed in 1985 and the area was RCRA-closed in 1989. This SWMU presents no current potential for release to ground water, surface water, and air, because the unit is no longer being used and the unit met the requirements of an IEPA-approved RCRA closure plan.

There was a past release to on-site soils from this unit. Soil removal was performed during facility and RCRA closure to achieve IEPA cleanup objectives. Because IEPA RCRA-closed this unit, it is assumed that any contamination remaining is below cleanup objectives and presents no threat to the environment. The past potential for release to air and surface water was low, due to the underground location of the unit. The past potential for release to ground water was moderate, due to soil contamination being present.

Recommendations:

RAI recommends no further action for this SWMU at this time.

SWMU 2

Former Outdoor Drum Storage Area Number 1

Conclusions:

This unit was a paved area located on the west side of the facility which was used to store hazardous wastes in 55-gallon drums. Soil sampling was performed and contaminant levels were below IEPA cleanup objectives. There is no current potential for release to ground water, surface water, air, and on-site soils from this SWMU because it is no longer used and was RCRA-closed in 1989

The past potential for release cannot be evaluated due to lack of detailed information for this unit.

Recommendations:

RAI recommends no further action for this SWMU at this time.

SWMU 3

Former Outdoor Drum Storage Area Number 2

Conclusions:

This unit was a paved area, located near the south fence, which was used to store hazardous waste in 55-gallon drums. This unit was RCRA-closed in 1989 and has not been used since. This SWMU presents no current potential for release to ground water, surface water, and air because the unit is no longer being used and the unit met the requirements of an IEPA-approved closure plan.

There is a documented release to on-site soils from this unit. The contaminated soil was removed during facility and RCRA closure activities. The past potential for release to ground water was moderate, due to soil contamination having been present. The past potential for release to air and surface water cannot be evaluated, due to lack of detailed information for this unit.

Recommendations:

RAI recommends no further action for this SWMU at this time.

SWMU 4

Former Waste Coolant TankiTiALS A

Conclusions:

This unit was an underground storage tank used to store waste coolant from equipment cooling operations and was located on the north side of the facility. This unit was removed in 1987. There is a low potential for release to ground water, surface water, and air from this SWMU at present. There is a possibility that contaminated soil still exists due to this unit not having received "LUST Closure" certification from IEPA.

The past potential for release to air and surface water was low, due to the underground location of the unit. The past potential for release to ground water was moderate, due to contaminated soil (since removed) having been present. Some contaminated soil was removed from the area around this unit, but the unit has not received LUST closure by IEPA. The present potential for soil and ground water contamination is unknown due to lack of information.

Recommendations:

RAI recommends that LUST closure approval be obtained for this unit. The process of LUST closure will ensure that any contamination has been remediated to IEPA cleanup objectives.

SWMU 5

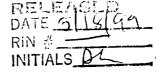
Forklift Maintenance Waste Accumulation Area

Conclusions:

This unit is an area inside the building used to store used oil and used batteries from forklift maintenance. This unit has a low potential for release to ground water, surface water, air, or on-site soils because it is located indoors, on concrete, and because of the small quantity of waste managed here.

Recommendations:

RAI recommends no further action for this unit at this time.



ENFORCEMENT

AOC 1

North End Tank Area

Conclusions:

This area contained one underground storage tank and the Former Waste Coolant Tank (SWMU 4). Some contaminated soil removal has been performed in this area. There is a moderate potential that soil contamination still exists in this area, due to this area not having received LUST closure. The current potential for release to ground water, surface water, and air is low due to the tanks and some contaminated soil having been removed, and the ground above this unit being paved.

The past potential for release to air and surface water was low, due to the underground location of these units. The past potential for release to ground water was moderate, due to soil contamination being present. Some contaminated soil was removed from the area around this unit, but the unit has not received LUST closure by IEPA.

Recommendations:

RAI recommends that LUST closure approval be obtained from IEPA for this AOC. The process of LUST closure will ensure that the area has been remediated to IEPA cleanup objectives.

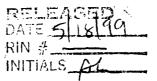
AOC 2

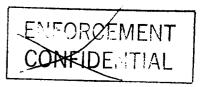
South End Tank Farm

Conclusions:

This area contained four underground storage tanks. Some contaminated soil removal has been performed in this area. There is a potential that soil contamination still exists in this area due to this area not having received LUST closure. The current potential for release to ground water, surface water, and air is low due to the tanks and some contaminated soil having been removed, and the ground above this unit being paved.

The past potential for release to air and surface water was low, due to the underground location of the units. The past potential for release to ground water was moderate, due to soil contamination being present. Some

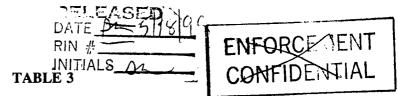




contaminated soil was removed from the area around this unit, but the unit has not received LUST closure by IEPA.

Recommendations:

RAI recommends that LUST closure approval be obtained from IEPA for this AOC. The process of LUST closure will ensure that the area has been remediated to IEPA cleanup objectives.



SWMU AND AOC SUMMARY

	SWMU	Dates of Operation	Evidence of Release	Recommended Further Action
1.	Former Waste Solvent Tank	1970 to 1985; RCRA-closed in 1989	Contaminated soil removed during facility closure	No further action is recommended
2.	Former Outdoor Drum Storage Area Number 1	1970 to 1983; RCRA-closed in 1989	None	No further action is recommended
3.	Former Outdoor Drum Storage Area Number 2	1983 to 1987; RCRA-closed in 1989	Contaminated soil removed during facility closure	No further action is recommended
4.	Former Waste Coolant Tank	1970 to 1985	Contaminated soil removed during facility closure	Obtain LUST closure approval from IEPA
5.	Forklift Waste Maintenance Accumulation Area	1988 to present	None	No further action is recommended
	AOC	Dates of Operation	Evidence of Release	Recommended Further Action
1.	North End Tank Area	1970 to 1987	Contaminated soil removed during closure	Obtain LUST closure approval from IEPA
2.	South End Tank Farm	1970 to 1987	Contaminated soil removed during closure	Obtain LUST closure approval from IEPA

REFERENCES

- Allis-Chalmers, 1980. RCRA Part A permit application, November 18.
- Allis-Chalmers, 1982. Letter to IEPA requesting withdrawal of Part A permit application, July 23.
- Allis-Chalmers, 1983. Cover letter and incomplete TSDF and Generator reports for 1982, February 14.
- Allis-Chalmers, 1985. Modified Closure Plan.
- Allis-Chalmers, 1988. Response to November 24, 1987 Compliance Inquiry Letter, February 1.
- Cravens, S.J., and A.L. Zahr, 1990. Ground Water Quality Investigation and Monitoring Program Design for the Lake Calumet Area of Southeast Chicago. <u>Illinois State Water Survey Division</u>, SWS Contract Report 496.
- Federal Emergency Management Agency (FEMA), 1982. National Flood Insurance Program-Flood Rate Insurance Map: Village of Matteson, Cook County, Illinois. Community-panel number 170123 0002C, November 15.
- Hughes, G.M., P. Kratz, R.A. Landon, 1966. Bedrock Aquifers of Northeastern Illinois. <u>ISGS</u>
 <u>Circular 406.</u>
- Illinois Environmental Protection Agency (IEPA), 1982. Letter to Allis-Chalmers listing deficiencies, April 1.
- IEPA, 1985. Compliance Inquiry Letter, June 11.
- IEPA, 1987. Compliance Inquiry Letter, November 24.
- IEPA, 1988a. Letter to Allis-Chalmers disapproving closure plan, January 28.
- IEPA, 1988b. Letter to Allis-Chalmers approving closure plan, August 16.
- IEPA, 1989a. Closure Certification Approval Letter, March 14.
- IEPA, 1989b. Letter indicating that remaining violations from 1985 were resolved, April 5.
- IEPA, 1992a. Phone conversation between William Earle (RAI) and IEPA-Maywood Office- LUST Section, September 18.
- IEPA, 1992b. Phone conversation between William Earle (RAI) and IEPA Maywood Office Division of Land Pollution Control.
- National Oceanic and Atmospheric Administration (NOAA), 1990. Local Climatological Data, Chicago, Illinois, ISSN 0198-1846.

- Ruffner, J.A., 1985. Climates of the States, Vol. 1, Gale Research Company, Detroit, Michigan, 1985.
- Space Center, 1988a. Revised Final Closure Plan, June 24.
- Space Center, 1988b. Closure Documentation Report, November 14.
- Suter, M., 1959. Summary Preliminary Report on Ground-Water Resources of the Chicago Region, Illinois. ISGS Cooperative Ground Water Report 1-S.
- United States Department of Agriculture (USDA), 1976. Soil Survey of Dupage and part of Cook Counties, Illinois.
- United States Department of Commerce (USDC), 1963. Rainfall Frequency Atlas of the United States. U.S. Government Printing Office.
- USDC, 1968. Climatic Atlas of the United States. U.S. Government Printing Office.
- U.S. Environmental Protection Agency (USEPA), 1982. Letter to Allis-Chalmers denying withdrawal of Part A permit application, June 13.
- USEPA, 1984. Letter to Allis-Chalmers stating that RCRA Closure must be performed to withdraw Part A permit application.
- United States Department of the Interior (USDI), 1984. National Wetlands Inventory for Steger, Illinois Quadrangle.
- United States Geological Survey (USGS), 1991. Topographic map for Steger Quadrangle, Illinois.
- Vedder, Price, Kaufmann, and Kammholz (VPK&K), 1987. Final Closure Plan, November.
- Willman, H.B., 1971. Summary of the Geology of the Chicago Area. ISGS Circular 460.

ATTACHMENT A
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

Space Center, Inc.
Formerly Allis-Chalmers
21800 South Cicero
Matteson, Illinois 60443
ILD 074 428 434

Date:

July 27, 1992

Primary Facility Representative: Representative Telephone No.:

Mike Semrick, General Manager, Space Center

(708) 748-7111

Inspection Team:

William Earle, Resource Applications, Inc. (RAI)

Laura Czajkowski, RAI

Photographer:

William Earle

Weather Conditions:

Sunny, temperature about 90°F

Summary of Activities:

The visual site inspection (VSI) began at 9:00 a.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. The Space Center representative then discussed the facility's current operations, solid wastes generated, and release history. The facility representative provided the inspection team with copies of available requested documents.

The VSI tour began at 9:30 a.m. Photographs of all SWMUs, or the former location of the SWMUs, were taken.

The tour concluded at 10:00 a.m., after which the inspection team held an exit meeting with facility representatives. The VSI was completed and the inspection team left the facility at 10:15 a.m.



Photograph No. 1 Orientation:

Description:

West

Location: SWMU 1

Date: 7/27/92

Location: SWMU 2

The Former Waste Solvent Tank (SWMU 1) was located approximately where the bottom part of the wall is stained.



Photograph No. 2

Orientation: Description: West

Date: 7/27/92 This concrete square is the approximate area where the Former Outdoor Drum Storage

Area (SWMU 2) was located.



Photograph No. 3 Orientation:

Location: SWMU 3 Date: 7/27/92

Description: The asphalt area is where the Former Outdoor Storage Are Number 2 (SWMU 3) was located.



Photograph No. 4 Orientation:

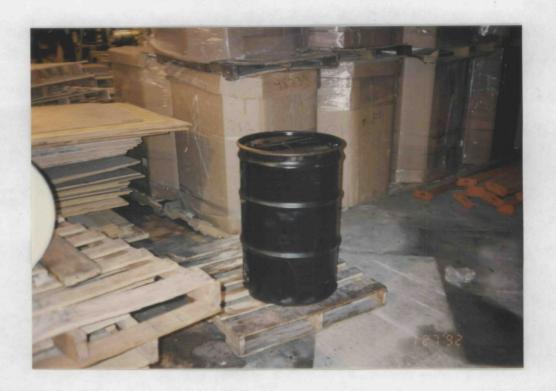
Description:

West

Location: SWMU 4, AOC 1

Date: 7/27/92

This is the area of the North End Tank Area (AOC 1) where two underground storage tanks were located. The Former Waste Coolant Tank (SWMU 4) was also located in this general area.



Photograph No. 5

Orientation:

North

Description:

The drum in the picture contains used oil from the forklifts.

Location: SWMU 5 Date: 7/27/92

Location: SWMU 5



Photograph No. 6

Orientation: Description: West

Date: 7/27/92 The batteries in the picture are all used batteries from forklifts awaiting disposal. One battery is covered with a rag used in cleanup from forklift maintenance. Note staining of cardboard on rear pallet.



Photograph No. 7 Orientation:

Description:

The grass area is the approximate location of AOC 2.

Location: AOC 2 Date: 7/27/92 ATTACHMENT B
VISUAL SITE INSPECTION FIELD NOTES

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	partly Claudy, 77°F		
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